

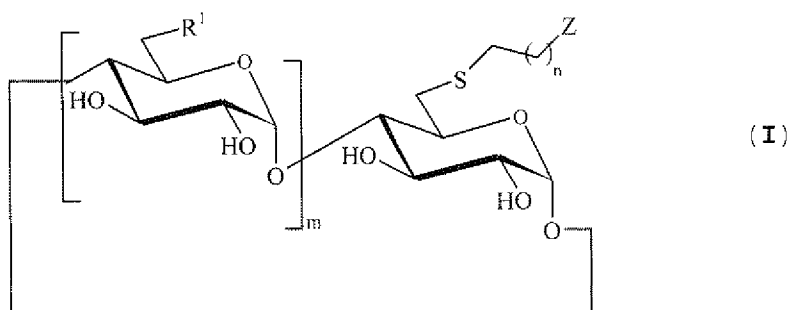
AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-29. (canceled)

30. (withdrawn, currently amended) A process for the preparation of a compound of formula (I)



in which:

- n represents an integer from 1 to 6;
- m represents an integer equal to 5, 6 or 7;
- R¹ represents either an OH group or an -S-CH₂-(CH₂)ₙ-Z group, the R¹ groups all being identical;

- Z represents either:

- \* an NHX group,
- \* a quaternary ammonium group of the  $^+NX_3$  form,
- \* a  $NX-C(=S)-NHR$  group,



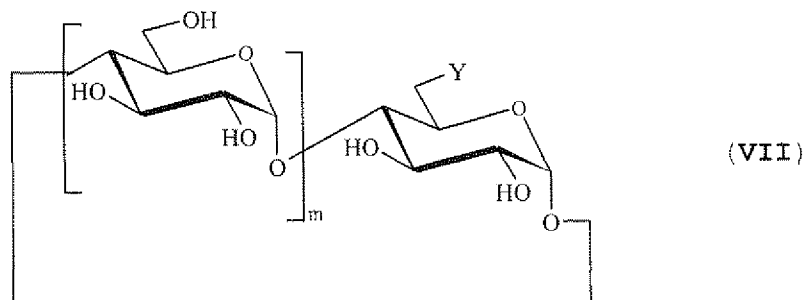
X representing a hydrogen atom or an alkyl group comprising from 1 to 6 carbon atoms, ~~and in particular being a methyl, ethyl, propyl or butyl group, and~~

R representing a hydrogen atom, a linear or branched alkyl substituent with 1 to 12 carbon atoms, or an aromatic group ~~such as the phenyl, benzyl or naphthyl group, or derivatives of these groups~~ a derivative of said aromatic group carrying substituents at least one substituent on the aromatic ring ~~such as selected from the group consisting of~~ methyl, ethyl, chlorine, bromine, iodine, nitro, hydroxyl, methoxyl ~~[[or]]~~ and acetamido substituents,

or R representing a biorecognition element ~~such as comprising~~ an amino acid derivative, a peptide, a monosaccharide, an oligosaccharide, a multiplication element with several branchings comprising glucidic groups which can be identical or different, or a visualization probe or fluorescent or radioactive detection probe,

said process being ~~characterized in that it comprises~~ comprising the following stages:

- ~~the reaction of~~ reacting a compound selectively or totally halogenated in primary alcohol position, of the following formula (VII):



m being as defined above,

W representing an OH group or a Y group, the W groups all being identical,

and Y representing a halogen atom chosen from the group ~~constituted by~~ consisting of chlorine, bromine, and iodine, ~~and preferably being bromine or iodine,~~

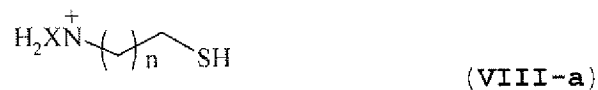
with an ω-aminoalkanethiol of the following formula

(VIII):



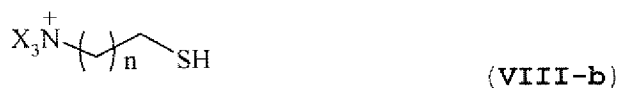
said ω-aminoalkanethiol optionally being N-alkylated, or the corresponding salt of the following formula

(VIII-a):



or a tetraalkylammonium salt of the following formula

(VIII-b):

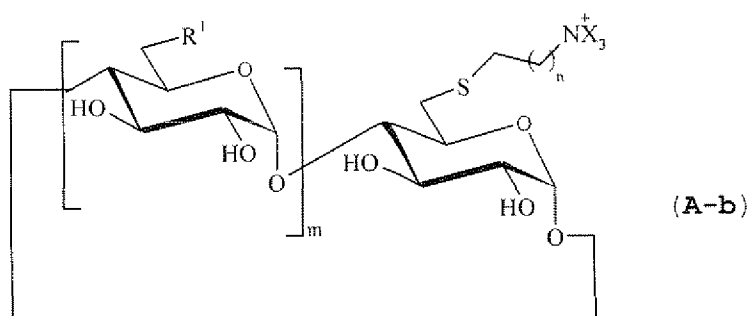
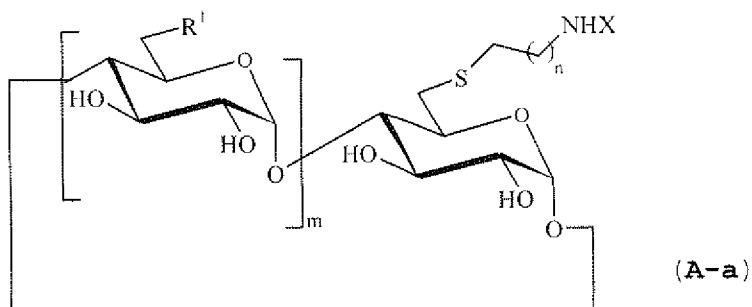


said salt being associated with a halide counter ion,  
~~preferably the chloride ion,~~

n and X being as defined above, ~~and X preferably being~~  
~~a hydrogen atom,~~

~~the compound of formula (VIII) preferably being~~  
~~cysteamine~~ ~~of~~ ~~formula~~  
 ~~$\text{H}_2\text{N}-\text{CH}_2-\text{CH}_2-\text{SH}$~~

in order to obtain a compound of formula (I) as defined  
 above and having the following formulae (A-a) or (A-b):



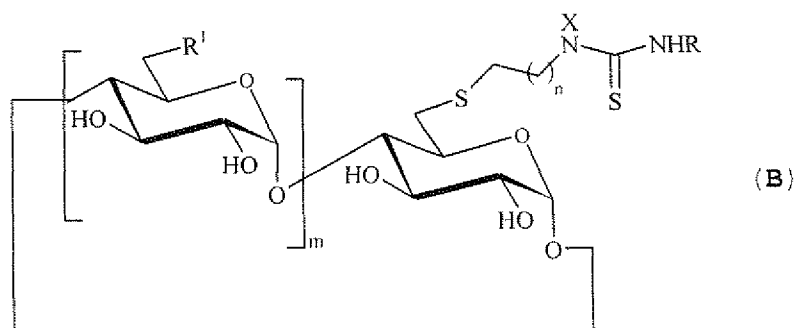
and optionally

- the reaction of the compound of formula (A-a) as obtained in the preceding stage with an isothiocyanate of the following formula (IX):

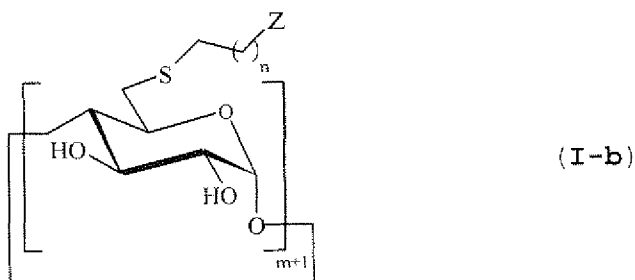


in which R is as defined above,

in order to obtain a compound of formula (I) as defined above, and corresponding to the following formula:

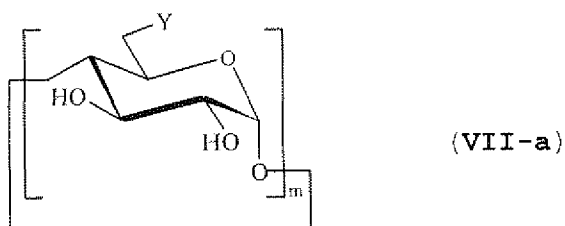


31. (withdrawn, currently amended) The preparation process according to claim 30 of a compound having the following general formula (I-b):



said process being ~~characterized in that it comprises~~  
 comprising the following stages:

- ~~the reaction of~~ reacting a per(6-deoxy-6-halo)  
 cyclodextrin compound, of the following formula (VII-a):



with an ω-aminoalkanethiol of the following formula  
 (VIII):



said ω-aminoalkanethiol ~~optionally~~ being N-alkylated,  
 or the corresponding salt of the following formula  
 (VIII-a):



or a tetraalkylammonium salt of the following formula  
 (VIII-b):

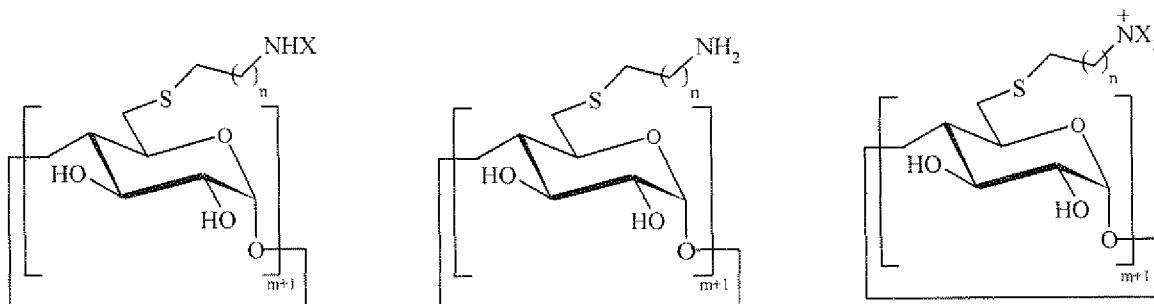


said salt being associated with a halide counter ion,  
~~preferably the chloride ion,~~

and X ~~preferably~~ being a hydrogen atom,

the compound of formula (VIII) preferably being cysteamine of formula  $\text{H}_2\text{N}-\text{CH}_2-\text{CH}_2-\text{SH}$ ,

in order to obtain a compound of the following formulae (I-c), (I-d) or (I-e)



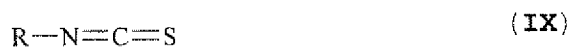
(I-c)

(I-d)

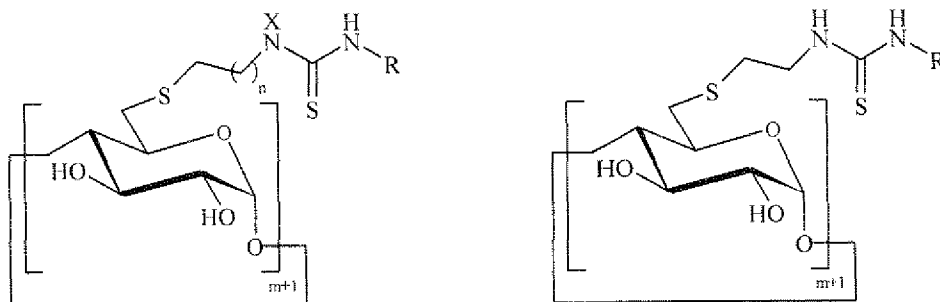
(I-e)

and optionally

- the reaction of the compound of formula (I-c) as obtained in the preceding stage with an isothiocyanate of the following formula (IX):



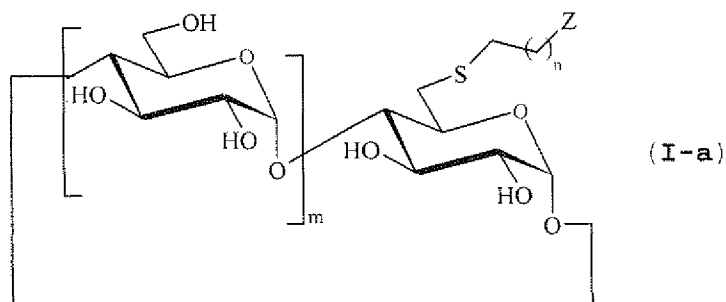
in order to obtain a compound of the following formula (II) or (II-a)



(II)

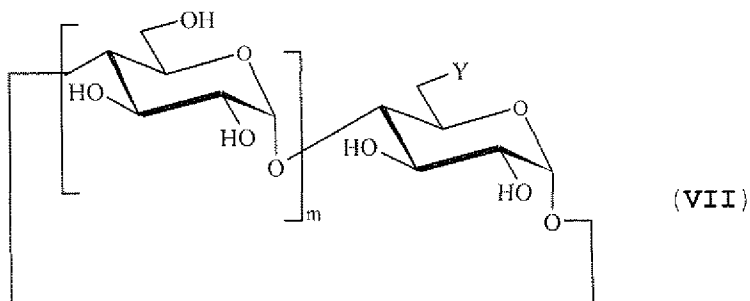
(II-a)

32. (withdrawn, currently amended) The preparation process according to claim 30 of compounds having the following formula:



~~said process being characterized in that it comprises~~  
comprising the following stages:

- ~~the reaction of~~ reacting a compound selectively halogenated in primary alcohol position, of the following formula (VII):



with an  $\omega$ -aminoalkanethiol of the following formula (VIII):



said  $\omega$ -aminoalkanethiol optionally being N-alkylated,



or the corresponding salt of the following formula  
 (VIII-a):



or a tetraalkylammonium salt of the following formula  
 (VIII-b):

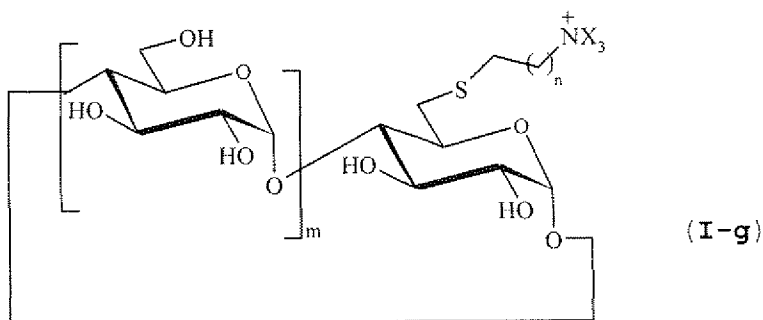
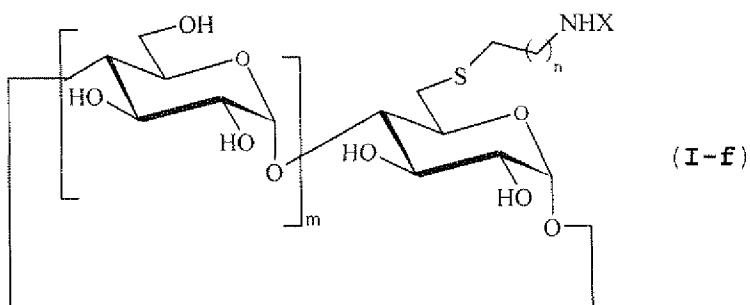


said salt being associated with halide as a counter ion, and preferably being the chloride ion,

and X preferably being a hydrogen atom,

the compound of formula (VIII) preferably being cysteamine of formula  $\text{H}_2\text{N}-\text{CH}_2-\text{CH}_2-\text{SH}$ ,

in order to obtain a compound of formula (I-f) or (I-g), of the following formula:

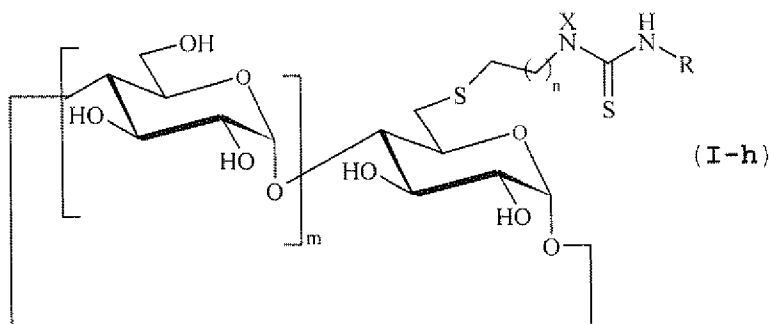


and ~~optionally~~

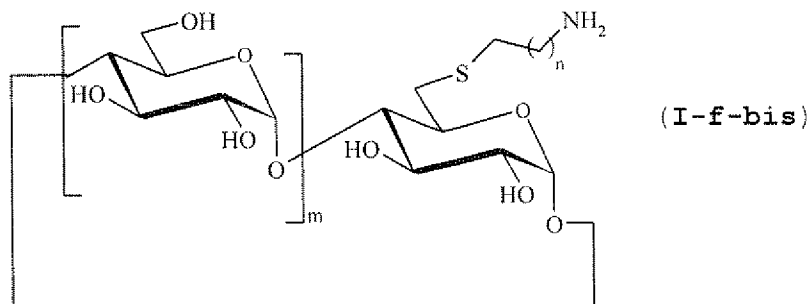
- ~~the reaction of~~ reacting the compound of formula (I-f) as obtained in the preceding stage with an isothiocyanate of the following formula (IX):



in order to obtain a compound of formula (I-h):



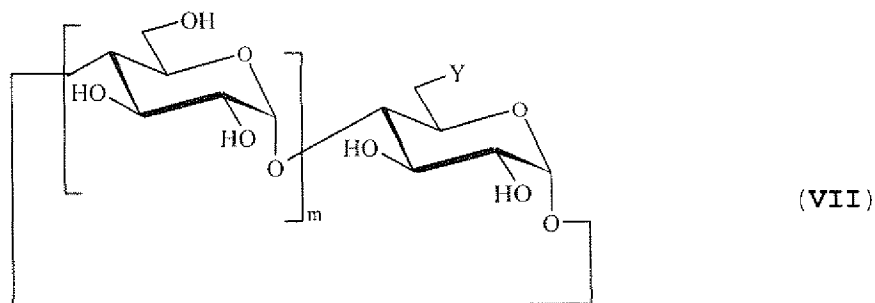
33. (withdrawn, currently amended) A process for the preparation of a compound of formula (I-f-bis)



in which m and n are as defined in claim 30, ~~preferably being~~ or n is equal to 1,

said process ~~being characterized in that it comprises~~  
~~the reaction of~~ comprising reacting a compound selectively

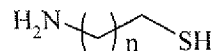
halogenated in primary alcohol position, of the following formula  
 (VII):



m being as defined above, and

Y representing a halogen atom chosen from the group  
~~constituted by~~ consisting of chlorine, bromine, and iodine, ~~and~~  
~~preferably being bromine or iodine,~~

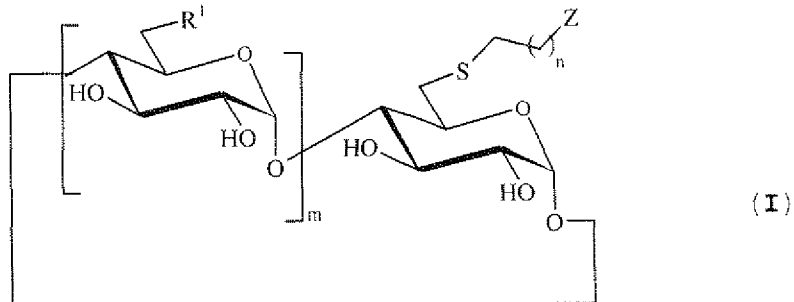
with an ω-aminoalkanethiol of the following formula:



n being as defined above,

or ~~preferably~~ with cysteamine of formula  $\text{H}_2\text{N}-\text{CH}_2-\text{CH}_2-\text{SH}$ .

34. (currently amended) A compound of the following  
 general formula:



in which:

- n represents an integer from 1 to 6;
- m represents an integer equal to 5, 6 or 7;
- R<sup>1</sup> represents either an OH group or an -S-CH<sub>2</sub>-(CH<sub>2</sub>)<sub>n</sub>-Z

group, the R<sup>1</sup> groups all being identical;

- Z represents either:

- \* an NHX group,

- \* a quaternary ammonium group of the <sup>+</sup>NX<sub>3</sub> form,

- \* a  $\text{NX} \begin{array}{c} \diagup \text{NHR} \\ \parallel \\ \text{S} \end{array}$  group,

X representing a hydrogen atom or an alkyl group comprising from 1 to 6 carbon atoms, ~~and being in particular a methyl, ethyl, propyl or butyl group,~~ and

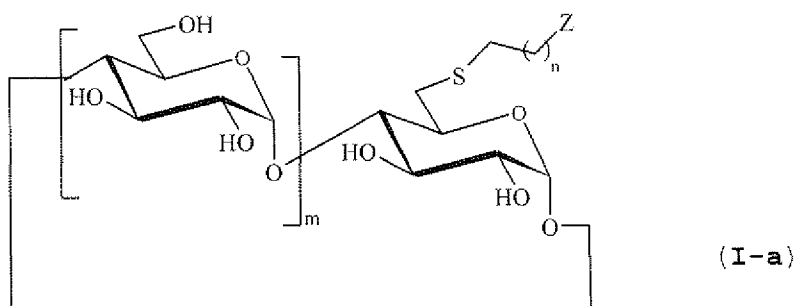
R representing a hydrogen atom, a linear or branched alkyl substituent with 1 to 12 carbon atoms, or an aromatic group ~~such as the phenyl, benzyl or naphthyl group, or derivatives of these groups~~ a derivative of said aromatic group carrying substituents at least one substituent on the aromatic ring ~~such as selected from the group consisting of~~ methyl, ethyl, chlorine, bromine, iodine, nitro, hydroxyl, methoxyl ~~[[or]]~~ and acetamido substituents,

or R representing a biorecognition element ~~such as~~ comprising an amino acid derivative, a peptide, a monosaccharide, an oligosaccharide, a multiplication element with several branchings comprising glucidic groups which can be identical or

different, or a visualization probe or fluorescent or radioactive detection probe,

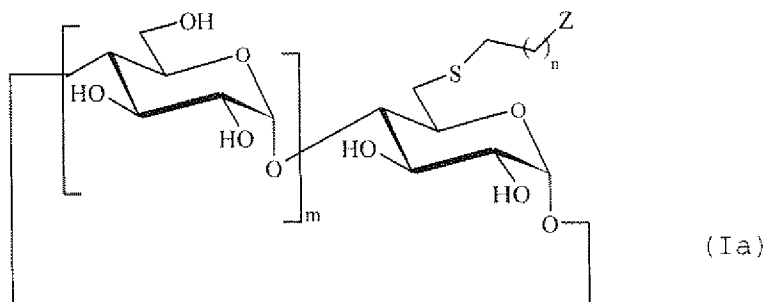
provided that the compound in which  $n = 1$ ,  $m = 6$ ,  $Z = \text{NH}_2$  and  $R_1 = \text{OH}$  is excluded.

35. (currently amended) The compound of claim 34, ~~characterized in that~~ wherein  $R^1$  represents OH, and having the following general formula:

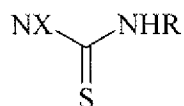


36. (withdrawn, currently amended) The compound of claim 34, ~~characterized in that~~ wherein  $R^1$  represents OH, having the formula (I-a) and ~~characterized in that~~ wherein  $Z$  represents an NHX group, X being ~~as defined in claim 5, and in particular being~~ a hydrogen atom.

37. (currently amended) The compound of claim 34, ~~characterized in that~~ wherein  $R^1$  represents OH, having the formula (I-a) and ~~characterized in that~~

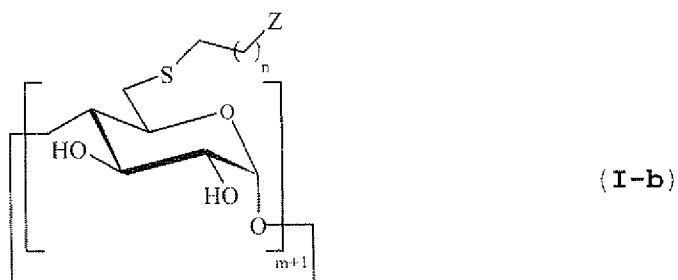


and Z represents a

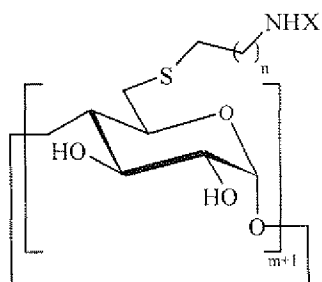


group, R being X being a hydrogen  
atom.

38. (currently amended) The compound of claim 34, characterized in that wherein  $R^1$  represents an  $-S-CH_2-(CH_2)_n-Z$  group, and having the following general formula:

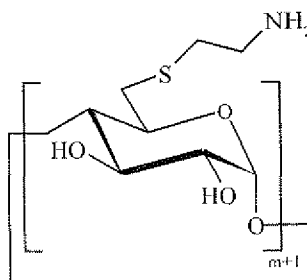


39. (withdrawn, currently amended) The compound of claim 34, characterized in that wherein  $R^1$  represents an  $-S-CH_2-(CH_2)_n-Z$  group, and having the following formula:



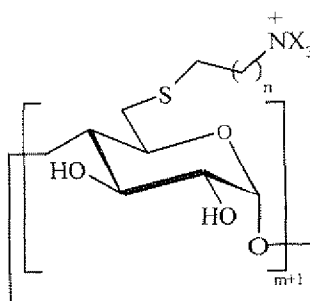
(I-c)

40. (withdrawn, currently amended) The compound of claim 39, ~~characterized in that~~ wherein X represents a hydrogen atom and in that n is equal to 1, and having the following formula:



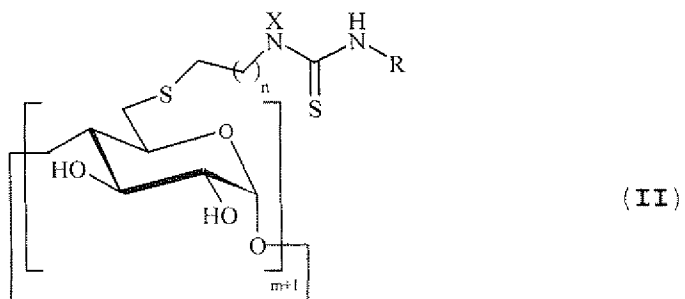
(I-d)

41. (withdrawn, currently amended) The compound of claim 38, corresponding to the following formula:



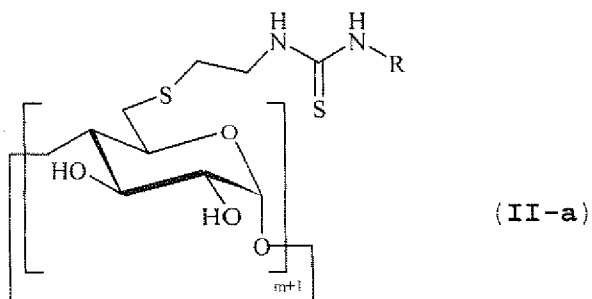
(I-e)

42. (currently amended) The compound of claim 38,  
~~characterized in that~~ wherein Z represents a  $\text{NX}-\text{C}(=\text{S})-\text{NHR}$  group,  
 and having the following formula:



R being identical for each  $\text{NX}-\text{C}(=\text{S})-\text{NHR}$  group.

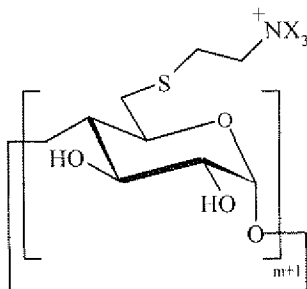
43. (currently amended) The compound of claim 38,  
~~characterized in that~~ wherein Z represents a  $\text{NX}-\text{C}(=\text{S})-\text{NHR}$  group,  
 X represents a hydrogen atom and ~~in that~~ n is equal to 1, and  
 having the following formula:





44. (currently amended) The compound of claim 34, ~~characterized in that~~ wherein at least one of the NHX groups as defined in formula (I) is protonated and associated with a monovalent anion chosen ~~in particular~~ from ~~[[the]]~~ chloride, bromide or iodide ~~[[ion]]~~.

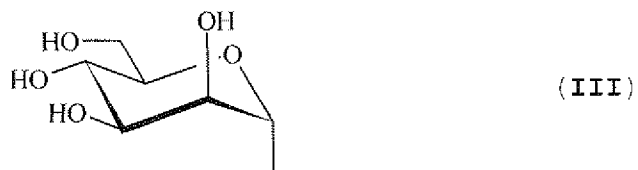
45. (withdrawn, currently amended) The compound of claim 38, ~~characterized in that~~ wherein n is equal to 1 and ~~in that~~ the Z group represents the quaternary ammonium  $^+NX_3$  group, and in that ~~[[it]]~~ the Z group can be associated with a monovalent anion chosen ~~in particular~~ from ~~[[the]]~~ chloride, bromide or iodide ~~[[ion]]~~, and having the following formula:



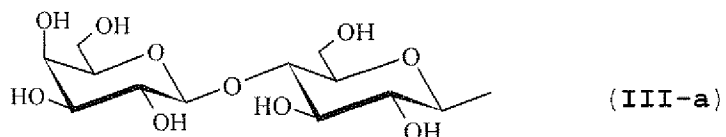
(I-e-bis)

46. (withdrawn, currently amended) The compound according to claim 34, ~~characterized in that~~ wherein  $R^1$  represents an  $-S-CH_2-(CH_2)_n-Z$  group, ~~wherein~~ Z represents a  $\begin{array}{c} NX \\ | \\ C \\ || \\ S \end{array} \begin{array}{c} NHR \end{array}$  group, X represents a hydrogen atom, n is equal to 1, and the R group is chosen from the following groups:

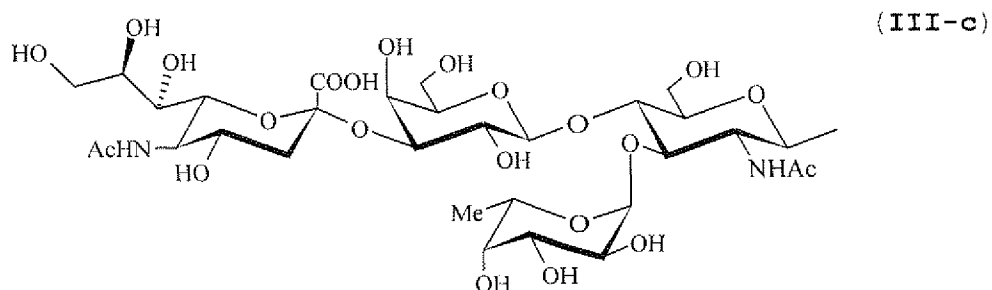
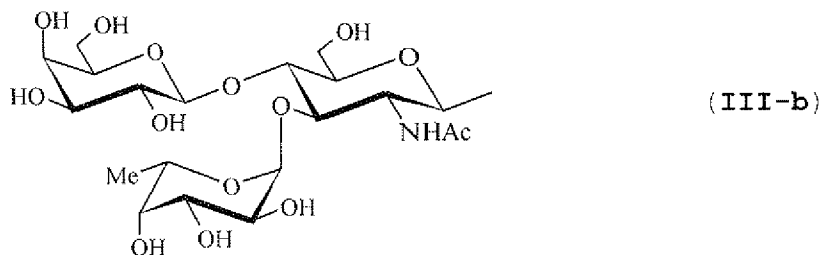
- the  $\alpha$ -D-mannopyranosyl group, of the following formula (III):



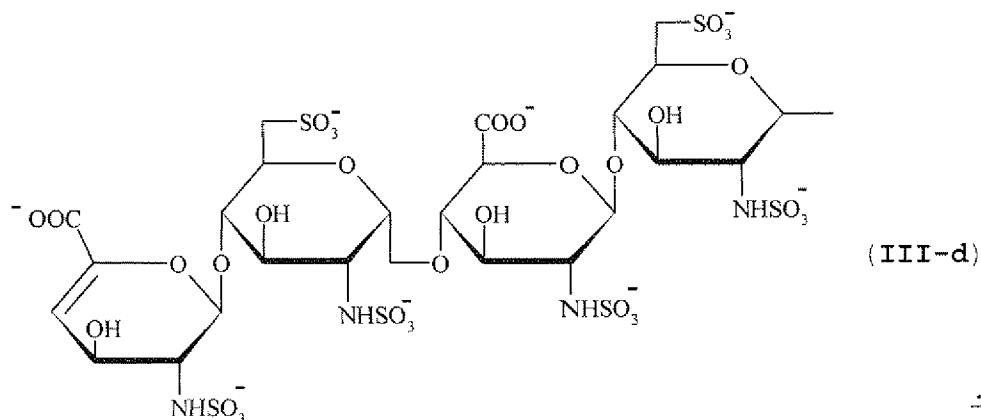
- the  $\beta$ -lactosyl group, of the following formula (III-a):



- the group derived from Lewis X trisaccharide or from sialyl Lewis X tetrasaccharide, of the following formulae (III-b) and (III-c) respectively:



- an oligosaccharide derived from heparin, of the following formula (III-d):



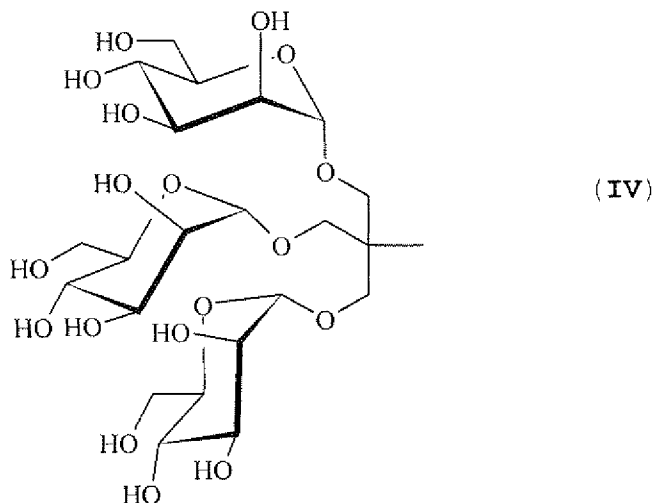
47. (currently amended) The compound of claim 34, ~~characterized in that~~ wherein  $R^1$  represents an  $-S-CH_2-(CH_2)_n-Z$  group, wherein Z represents a  $NX \begin{array}{c} \diagup \\ \text{C} \\ \diagdown \end{array} \begin{array}{c} \text{NHR} \\ \text{S} \end{array}$  group, X represents a

hydrogen atom, n is equal to 1, and:

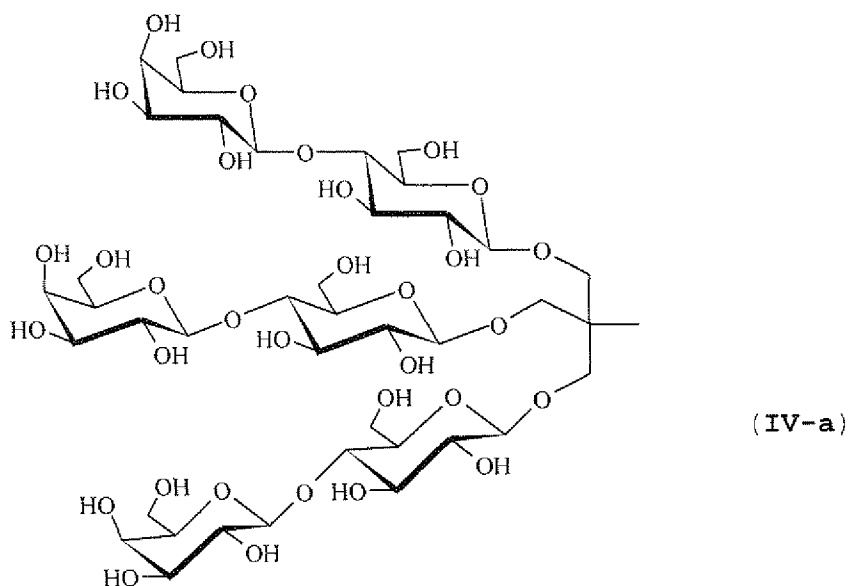
R comprises a branching element ~~derived from~~ comprising tris(2-hydroxymethyl)methylamine, or

R represents one of the following groups:

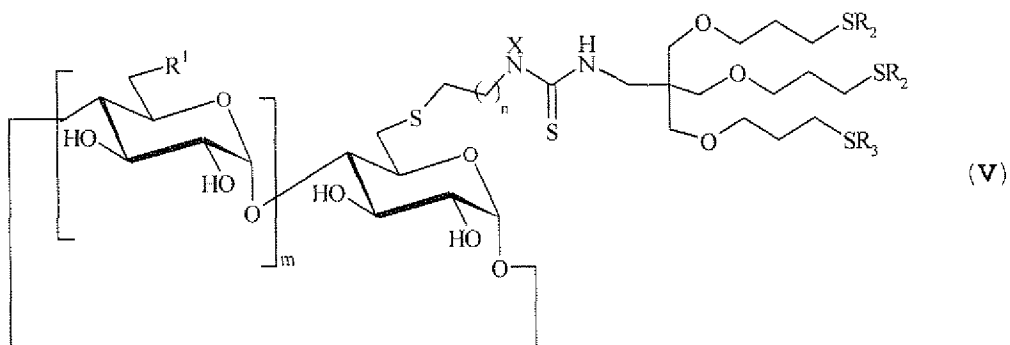
- the tris( $\alpha$ -D-mannopyranosyloxymethyl)methyl group, of the following formula (IV):



-the tris( $\beta$ -lactosyloxymethyl)methyl group, of the following formula (IV-a):



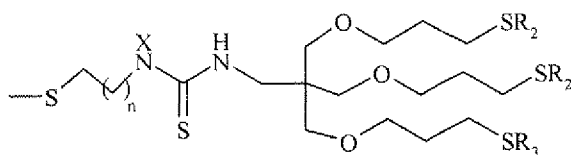
48. (currently amended) The compound of claim 34, wherein Z represents a  $\text{NX}=\text{C}(\text{NHR})\text{S}$  group, ~~characterized in that~~ wherein R comprises a branching element derived from pentaerythritol, said compound having the following formula:



in which  $R^2$  and  $R^3$  represent glucidic derivatives which can be different or identical or also a fluorescent or radioactive probe.

49. (currently amended) The compound of claim 48, ~~characterized in that~~ wherein  $R^1$  represents OH.

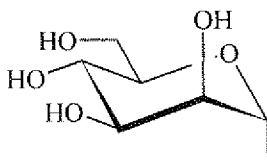
50. (currently amended) The compound of claim 48, ~~characterized in that~~ wherein  $R^1$  represents the ~~group of formula:~~



∴

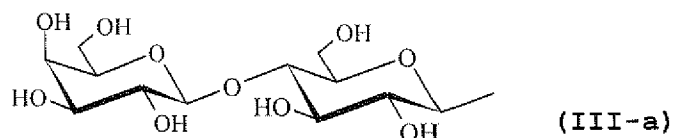
51. (withdrawn, currently amended) The compound of claim 48, ~~characterized in that~~ wherein n is equal to 1, ~~in that~~ X represents a hydrogen atom and ~~in that~~  $R^2$  and  $R^3$  represent one of the following groups:

- the  $\alpha$ -D-mannopyranosyl group, of the following formula (III):

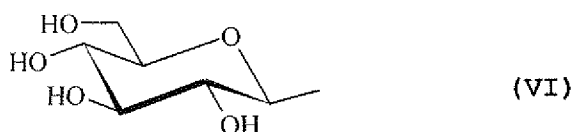


(III)

- the  $\beta$ -lactosyl group, of the following formula (III-a):



- the  $\beta$ -D-glucopyranosyl group, of the following formula (VI):



$R^2$  and  $R^3$  being able to be identical or different.

52. (currently amended) The compound of claim 34, ~~characterized in that~~ wherein m is equal to 6.

53. (currently amended) An inclusion complex of a compound according to claim 34 with a pharmacologically active molecule, ~~[[the]]~~ a molar ratio between the compound ~~according to claim 5~~ and the pharmacologically active molecule ~~advantageously~~ being approximately 50:1 to approximately 1:1.

54. (currently amended) An inclusion complex of a compound according to claim 34 with a pharmacologically active molecule, ~~[[the]]~~ a molar ratio between the compound ~~according to~~

~~claim 5~~ and the pharmacologically active molecule ~~advantageously~~  
being approximately 50:1 to approximately 1:1, ~~said complex being~~  
~~characterized in that~~ wherein the pharmacologically active  
molecule is an antineoplastic agent, ~~in particular~~ belonging to  
the taxol family.

55. (previously presented) A pharmaceutical composition  
comprising a compound according to claim 34 with a  
pharmacologically acceptable vehicle.

56. (currently amended) A pharmaceutical composition  
comprising an inclusion complex of a compound according to claim  
34, with a pharmacologically active molecule, ~~[[the]]~~ a molar  
ratio between the compound and the pharmacologically active  
molecule ~~advantageously~~ being approximately 50:1 to approximately  
1:1, in association with a pharmacologically acceptable vehicle.

57. (previously presented) A pharmaceutical composition  
comprising a compound according to claim 34 with a  
pharmacologically acceptable vehicle, in the form of an aqueous  
solution.

58. (currently amended) A pharmaceutical composition  
comprising an inclusion complex of a compound according to claim  
34 with a pharmacologically active molecule, ~~[[the]]~~ a molar

ratio between the compound and the pharmacologically active molecule advantageously being approximately 50:1 to approximately 1:1, in association with a pharmacologically acceptable vehicle, the pharmacological compound being in the form of an aqueous solution.

59. (currently amended) A pharmaceutical composition comprising a compound according to claim 34 with a pharmacologically acceptable vehicle, ~~characterized in that it~~ wherein the composition contains per single dose approximately 50 mg to approximately 500 mg of one of the ~~compounds~~ compound.

60. (currently amended) A pharmaceutical composition comprising an inclusion complex of a compound according to claim 34 with a pharmacologically active molecule, ~~[[the]]~~ a molar ratio between the compound and the pharmacologically active molecule advantageously being approximately 50:1 to approximately 1:1, in association with a pharmacologically acceptable vehicle, ~~characterized in that it~~ wherein the composition contains per single dose approximately 100 mg to approximately 750 mg of one of said complex.